ABSTRACT

An essentially fully balanced plug valve is presented in which the flow control contour is interior to the moving member. The sealing edge of the moving member is at the exterior surface relative to the interior contour. This sealing edge is formed by use of matching angles on the interior of the moving member and the exterior of the stationary member. As a result, operation of the plug is fully balanced with the internal fluid pressure of the liquid therein. The sealing surface of the stationary member is positively retained therein to prevent blowout of the sealing surface. Should failure of the sealing surface occur, a secondary metal-to-metal seal will provide fluid containment albeit possibly at a reduced containment level.